

Children's discourses of natural spaces: considerations for children's subjective well-being

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Abstract

Based on the evidence provided in the literature, it is manifest that increased time spent in nature increases various aspects of children's well-being. Using discourse analysis on focus group interviews with 28 children between the ages of 12 and 14 years old from three socio-economically diverse communities in the Western Cape of South Africa, the study aimed to explore how children construct and assign meaning to natural spaces. More specifically the study explored how children use specific discursive resources and repertoires to construct and assign meaning to their engagement with natural spaces, and the extent to which this influences their subjective well-being. Several pertinent discourses emerged from the participants' accounts within four themes of: *Safety and natural spaces*, *Appreciation for natural spaces*, *Degradation of Nature: Thinking environmentally*, *acting pro-environmentally*, and *Natural spaces and children's subjective well-being*. The study highlights the critical role that children's engagement in natural spaces has on their subjective well-being, and how these benefits can be harnessed to better children's overall quality of life.

1 Introduction

A considerable body of empirical research studies and theoretical papers has specifically focused on nature as a relational space of children and young people (see Benson 2009; Gill 2014; Hordyk et al. 2014; Kerret et al. 2014; King and Church 2013; Kjørholt 2002; Sancar and Severcan 2010). A shared conclusion in this large body of literature is that time spent in nature enhances children's well-being both directly and indirectly (Adams and Savahl 2015; Chawla 2007; Evans et al. 2007; Gill 2014; Kerret et al. 2014; Wals 1994; Wells 2000). However, there is a growing consensus amongst scholars that children's experiences and engagement in nature has reduced, and that their range of mobility and ability to explore nature has shrunk, and shifted closer to home (Bannerjee and Driskell 2002; Evans 2004; Wells 2000).

The importance of the influence of nature experiences on children's subjective well-being in particular is emphasised in Kerret et al.'s (2014) explanatory theoretical model which proposes psychological mechanisms through which 'green' schools may influence not only students' learned environmental behaviour (EB) but also their subjective well-being. "Subjective well-being is recognised as a component of Quality of Life, and is denoted as

people's affective and cognitive evaluations of their lives" (Diener 2000, p.1). A seminal scholar in the field of well-being, Diener (1984), purported that subjective well-being comprises three distinct components, namely life satisfaction, positive experiences, and negative experiences. Diener et al. (1999) postulate further that the advancement of the area of subjective well-being was the proclivity of society to "value" the individual, attribute significance to subjective perceptions and appraisals of life, and "the recognition that well-being necessarily includes positive elements that transcend economic prosperity" (p.276). At this juncture, however, it is critical to note the dichotomy which Fattore et al. (2012) have identified with regard to two distinct approaches to researching children's subjective well-being. According to Fattore et al. (2012), these approaches differ fundamentally in relation to their epistemological frameworks, the first, and more dominant of the two is premised on objectivist notions, and often aligns to the use of standardised quantitative methods of data collection, predominantly employing Diener's (1984, 2000) definition of subjective well-being; while the second approach is premised on the new sociology of childhood which foregrounds the "acknowledgement of children as valid informants and participants in the research process, and the subsequent shift towards soliciting their knowledge, opinions, attitudes and perceptions on matters that affect them." (Savahl et al. 2015, p. 750). Fattore et al. (2012) caution against using the objectivist approach without critical reflection. For example, one should question the extent to which these conceptualisations allow for an understanding of how children assign meaning to their subjective experiences of life? Furthermore, to what extent do objectivist notions take adequate consideration of prevailing social and cultural contexts? (see Fattore et al. 2007; 2012; Manderson 2005, for further discussion).

Further confounding the debate is the eudaimonic and hedonic conceptualisations of well-being—hedonic conceptualisations are aligned with life satisfaction and the pursuit of happiness, while eudaimonic conceptualisations are aligned with purposiveness, engagement, and meaning in life (see Huppert and So 2013; Ryan and Deci 2001). This is displayed in the dichotomy between subjective well-being and psychological well-being (see Ryff 1989), and the recent recommendation that they be combined to form a more substantive concept of well-being (Keyes 2002; Seligman 2011). In the literature this has been identified as the concept of flourishing, which denotes the experience of life going well—of feeling good and functioning optimally, and is related to a high level of mental health and well-being (Huppert and So 2013). Based on the evidence provided in the literature, it is thus comprehensible to surmise that increased time spent in nature increases both hedonic and eudaimonic aspects of children's well-being—experiences in nature provides children with purpose and meaning in life, increases life satisfaction, and positively influences their quality of life (Kerret et al. 2014).

A key theme which emerged from the summation of the literature by Myers (2012) was that nature brings about both intense positive and negative emotional experiences in children. In developing countries like South Africa, an important consideration for understanding children's engagement with the natural environment is access to *safe* natural spaces. Adams and Savahl (2015) point to children's restricted access to natural spaces owing to threats toward their safety, particularly in low socio-economic status (SES) communities. These low-SES

communities are very often characterised by environments which are of poor quality, comprising perilous natural play spaces, less natural features, poorer services, more traffic and crime, and higher levels of physical deterioration in comparison to more affluent areas (Adams and Savahl 2015; Bannerjee and Driskell 2002). It is also important to consider the extent to which nature influences children's subjective well-being, as some literature points to the absence of a relationship between the two (see Adams and Savahl 2016a). For example, in a study by Adams and Savahl (2016a) which endeavoured to ascertain the relationship between children's global and domain-specific life satisfaction and their environmental worldviews, no significant relationship was found. Huynh et al. (2013) assert that nature is in fact one contextual determinant of children's emotional well-being. They further indicate that while a large literature base maintains that exposure to nature positively influences people's health and well-being, there is a dearth of empirical evidence to support this (Huynh et al. 2013). The studies which have been undertaken have primarily been conducted in controlled settings, with a growing number of studies being conducted in natural settings, such as camps and Forest (see Knight 2009; Ridgers et al. 2012) and Mountain School (Burgess and Mayer-Smith 2011). This points to the need for further studies to explore the extent to which nature influences children's subjective well-being specifically.

Concerning children and the natural environment, there are two systematic reviews which aimed to provide comprehensive syntheses of studies focusing on the various aspects of children and nature interactions (Adams and Savahl 2016b; Gill 2014). These reviews expound the point that children's experiences and engagement in nature as a space and place are multifarious. More so, that spending time in nature is a component of a 'balanced diet' of childhood experiences advancing numerous developmental benefits, positive environmental attitudes, and influencing various domains of their well-being-physical, emotional, and psychological. A fundamental finding of the review by Adams & Savahl (2016b) was that although the studies provide key insights into children's perceptions of natural spaces and places, very few studies have asked children directly about what nature means to them, and what it encompasses. The authors enunciate that, "There is an urgent need for studies with children to begin to explore children's subjective understandings, perceptions, and constructions of natural spaces, especially in developing contexts. While these perceptions are context-specific, they can begin to supplement much of the research conducted with children which quantitatively attempts to answer some of the core questions about child-nature interactions and engagement." (p.21). Critical in this process is elucidating the meanings that children assign to their engagement with nature and its influence on their subjective well-being. Evidence from a substantial body of literature shows that children's engagement, as well as indirect interactions, in natural spaces enhances various domains of their well-being. However, an absence exists in exploring the influence of nature on children's subjective well-being specifically. More so, there are few studies which qualitatively investigate children's constructions and understandings of nature (see Collado et al. 2013; Kong 2000; Hordyk et al. 2014; Wals 1994).

The current study hopes to contribute in this regard. It aims to unpack how children make sense of and assign meaning to interactions with natural spaces, and to explore children's

understandings of the importance that engaging with nature has on their subjective well-being.

1.1 Aim of the Study

The overarching aim of the study was to explore how children construct and assign meaning to natural spaces. More specifically, the study was guided by the following objectives:

- To explore how children use specific discursive resources and repertoires to construct and assign meaning to their engagement with natural spaces
- To explore how children's constructions and assignments are manifested in their discourses
- To explore children's perceptions of the extent to which engagement with natural spaces influences their subjective well-being

2 Method

2.1 Design

The study employed a qualitative methodological framework to explore how children construct and make sense of natural spaces. Data were collected by means of three interrelated, sequential data collection techniques namely focus group interviews, community mapping, and photovoice. Focus group interviews constituted the primary data collection technique, whilst the community mapping and photovoice were employed as supplementary techniques. However, this study only reports on results from the focus group interviews.

2.2 Research Context

The study was conducted in the Western Cape Province of South Africa. The participants were selected from three primary schools located in three socio-economically diverse (low and middle-income) communities, in both rural and urban geographical locations. There is general acknowledgement amongst researchers that children residing in varying socio-economic backgrounds display disparate and diverse experiences of childhood, reflecting the plurality of 'childhoods' (Jenks 2004). It is thus important to be mindful of the diversity of childhood in terms of class, gender, ethnicity and culture as well as the related construct of 'race' (Savahl 2010). Moses (2005) contends further that it is important to remain cognisant of the existing impact of city planning owing to the Apartheid regime which is still pervasive in children's daily lives in this context.

The participants were selected from three socio-economically diverse areas in the Western Cape, namely Gordon's Bay, Mitchell's Plain, and Stellenbosch.

Gordon's Bay

Gordon's Bay is a coastal town located approximately 54 km from the Cape Town City Centre. The population was estimated to be 15 786, with predominantly 'White' residents. Key indicators show that majority of the population live in formal housing with access to basic services; have completed secondary schooling or higher, with most households falling within the R12 801- R25

600 income bracket. The crime rate for 2013–2014 was substantially lower than national estimates with the majority of reported crimes consisting of common assault, burglary, and a low reported incidence of sexual crimes and murders (South African Police Services 2014).

Mitchell's Plain

Mitchell's Plain is situated approximately 32 km from the Cape Town City Centre, and has been identified as one of the most dangerous areas in South Africa with the highest incidence of reported crimes (www.crimestatssa.com). The population was estimated to be at 310 485, and the majority classified as 'Coloured'¹ (Statistics South Africa 2011). National estimates show that only over a third of the population have completed secondary education or higher. Thirty-eight percent of households have a monthly income of R3200 or less, with the majority living in formal housing. Although national census data shows that the vast majority have access to basic services, the suburb is characterised by a range of socio-economic problems.

Stellenbosch

The Stellenbosch Municipality is situated in the centre of the Cape Winelands, and is situated 50 km from the Cape Town City Centre. The municipality has an estimated population of 155 753, with majority classified as 'Coloured'. Forty-three percent have completed secondary education or higher, while 3.1 % have not completed any formal schooling. Most of the population live in formal housing and majority having households with access to basic amenities (Statistics South Africa 2011). Nationally, Stellenbosch is ranked among the top 10 areas with the highest incidence of reported crime, evincing amongst the highest incidence of burglary, theft out of motor vehicle, commercial crime, and robbery (www.crimestatssa.com).

2.3 Sampling and Participants

The total sample consisted of 28 children between the ages of 12 and 14, selected from three primary schools in low and middle income communities, situated in rural and urban geographical locations in the Western Cape of South Africa. While it was envisaged to obtain an equal sample of girls and boys from each school, due to the voluntary nature of participation this was not always possible. The motivation for selecting this age cohort was due to the identification in the literature that children of this age group are more likely to assess their own behaviour and the impact of their subsequent actions upon the environment (Wilson 1996). The primary schools included in the study were purposively selected. The primary motivation for the final selection of the three participating schools were dependent on whether they offered access to children from different racial, cultural, language, and socio-economic backgrounds. Additional inclusion criteria included perceived reliability, enthusiasm and willingness to participate in the study.

One group consisting of 10 participants each was selected from two schools and 8 participants from the third school, resulting in a total of three groups with 28 children. Three focus group sessions were conducted with each group. Further details of the sample composition are presented in Table 1 below.

Attrition for the three groups was low and only occurred in two of the groups. In the sample from Mitchell's Plain, data collection spanned from the end of 2014 to early-2015. Attrition for this school was one participant who moved out of the area and therefore changed schools, thereby missing only one session. In the sample from Stellenbosch there was no attrition, however, one participant missed one session due to ill health.

2.4 Data Collection

Data were collected by means of focus group interviews, characterised by a moderator facilitating and engaging a small group discussion between selected individuals regarding the proposed topic (Catterall and Maclaran 1997). In the current study a sustained contact or prolonged engagement model was followed. This entailed a series of 9 focus group interview sessions conducted over a four month period. The advantage of the sustained contact model is that it gradually enables and facilitates greater access to children's "secrets and worlds as the social distance between adult researcher and child subject is lessened" (Punch 2001, p.6). Consistent with the exploratory design, the focus groups followed a semi-structured interview format, with several core questions per group as presented in Table 2. The focus groups were preceded by an initiation session, and followed by two sessions focusing on photo-elicitation and community mapping (reported elsewhere).

2.5 Data Analysis

The use of discourse analysis as a method of research within childhood studies has proliferated in recent years (See Alldred and Burman 2005; Kjørholt 2002; Savahl 2010; Savahl et al. 2015).

Table 1 Sample composition

Research site	Sample	Age	Grade	Socioeconomic status
Gordon's Bay (urban)	<i>n</i> = 10 (9 girls; 1 boy)	12	6	Medium
Mitchell's Plain (urban)	<i>n</i> = 10 (5 girls; 5 boys)	11–12	6	Low
Stellenbosch (rural)	<i>n</i> = 8 (5 girls; 3 boys)	12–14	5–7	Low

Table 2 Focus group guiding questions

Focus group 1:	Focus group 2–3
<ul style="list-style-type: none"> • What does being happy mean to you? • What are the things that make you happy? • What do you do for fun? • What do you do in your free time? • What do you understand by the natural environment and natural spaces? 	<ul style="list-style-type: none"> • What does nature mean to you? • Tell me about how you spend your time in the natural environment? • How does spending time in the natural environment make you feel? • Do you think spending time in nature is important for children your age? • How would you feel if you were unable to engage in natural spaces? • What are your favourite places in nature? Why? What do you do there?

In a previous edition of *Child Indicators Research*, Savahl et al. (2015) used discourse analysis to ascertain children’s construction of their well-being. Contemporary thinking on discourse analysis in childhood studies has been greatly influenced by the paradigm shift initiated by James and Prout (1990) focusing on social constructionism as it emerged within the sociology of childhood. As a number of variations of discourse analysis exist, notwithstanding the absence of a unified approach or definition, two broad versions have generally been identified within psychology (Savahl 2010). With its genesis in ethnomethodology and communication studies, the first version focuses on “discourse practices and how speakers draw on various forms of discursive resources to construct particular realities and to achieve certain aims in interpersonal contexts” (Savahl 2010, p. 141; see e.g. Edwards and Potter 1992), while the second version is often associated with the Foucauldian tradition which “focuses on the function of discourse in the constitution of subjectivity, selfhood and power relations” (Savahl 2010, p.141).

The current study employed the version as proposed by Potter and Wetherell (1987), which is a combination of the aforementioned types- a strand of discourse analysis which has been employed to scrutinise language in a broader social context. Discourse in this sense consists of an amalgamation of both spoken and written texts. Potter and Wetherell (1987, p.7) thus state that “*As discourse functions independently of the intentions of speakers or writers, their ideas do not merely serve to order and reflect the social world, but also to construct it*”. The discourse analysis was preceded by thematic analysis. The emerging discourses are analysed within the emerging themes.

2.6 Procedure and Ethics

The core ethics principles were strictly adhered to throughout the study. Ethics clearance to conduct the study was obtained from the Senate Research and Ethics Committee at the

university where the researchers are based. Subsequent to obtaining ethics clearance, the principals of the selected schools were contacted, and asked to participate in the study. Once permission was gained from the principals, the names of the three schools were submitted to the Western Cape Education Department (WCED) for ethics clearance. A meeting was arranged between the researchers and principals to discuss the details of the study and what the schools' participation entailed once the WCED ethics clearance was granted. The participants who were interested in participating were recruited by the grade 6 head of department, and at one school, the school counsellor. Children were only allowed to participate if signed consent was obtained from their parent or guardian, and the child themselves. An initial session was held with the participants wherein the purpose and aim of the study, what their participation would entail, as well as the core ethics principles of informed consent, voluntary participation, confidentiality, and the right to withdraw from the study at any time without negative consequences. Participants were requested to keep the content and discussions that took place within the sessions private and confidential. The sessions were audio-recorded, with the participant's permission, and transcribed verbatim. The transcribed texts were verified by a research psychologist external to the study. The participants were also informed that the data gathered will be used for a monograph thesis which will be publically available, as well as peer-reviewed publications and conference presentations. Focus group discussions were conducted on the school premises during administration sessions at the beginning of the school day and after school. They were conducted by the primary researcher and assisted by a co-facilitator.

3 Findings

The primary aim of the study was to explore how children construct and assign meaning to natural spaces. More specifically the study aimed to explore the discursive resources and repertoires children use to construct these meanings, how children's constructions and assignments are manifested in their discourses, and children's perceptions of the extent to which engagement in natural spaces influences their subjective well-being. Four key themes emerged, namely *Safety and natural spaces*, *Appreciation for natural spaces*, *Degradation of Nature: Thinking environmentally, acting pro-environmentally*, and *Natural spaces and children's subjective well-being*; with several pertinent discourses emerging in each.

A key focal point throughout children's discussions was the issue of safety in natural spaces in their communities. While each research site possessed distinct characteristics and nuances in terms of objective indicators such as income per household, population, formal housing, educational attainment, and crime levels; in this study socio-economic status (SES) of the communities in which children resided played a pertinent role shaping their experiences, narratives, understandings, and meaning making. It is crucial to note that the reference to rural spaces or geographical locations in the current study are quite disparate from the usual connotations of 'rural' in the international literature from developed countries (King and Church 2013; Matthews et al. 2000; Nairn et al. 2003; Sancar and Severcan 2010). While the notion of 'rural spaces' infer areas in the countryside with low population density, there is no consensus on the term, evincing its differentiated nature across countries (Braga et al. 2016). The rural area in the current study is synonymous with individuals living in poverty, and is

largely characterised by impoverishment and low SES, high levels of crime and violence, and a lack of resources and basic services, which would be classified by the Organization for Economic Co-operation and Development (OECD) as *Predominantly rural close to a city* (OECD 2011).

More so, the children from the differing SES communities evidently produced distinctive conceptualisations of nature which appeared to be influenced by the context and social milieu of their neighbourhoods, as well as their level of affordance to engage in nature. For the children from the low SES communities nature encompassed any space which possessed elements of nature, irrespective of it being designated playspaces for children, outdoor spaces, or 'back alley nature' (Wals 1994) close to home. The conceptualisations of nature for the children from the middle SES community were markedly different- these children made sense of nature as a familiar space, and pointed more to nature being synonymous with 'wild nature' such as the forest, the mountain, and the beach, which were all places children frequented and displayed an intrinsic care for. Findings from a study by Wals (1994) with children from two distinct contexts, the inner city and suburban areas, also pointed to how the familiarity with nature coloured children's perceptions and experiences therein. In his study, the children who were more familiar with nature were able to identify particular 'challenging' aspects in nature, while the children who had fewer experiences due to a lack of opportunities, emphasised the 'danger' inherent in nature. However, the children's perceptions of nature as dangerous in Wals (1994) study was not based on personal, first-hand negative experiences in nature, but seemed to be more consistent with parental and popular discourses around safety. Based on this, Wals (1994) notes that "The students who visit nature frequently are more familiar with it and seem comfortable enough to seek out challenges." (p.20)

It is thus evident that gradations in children's conceptualisation of the construct of nature exists. Aitken (2001) in fact contends that 'nature' is a socially constructed concept, which indorses Macnaghtan and Urry's (1999) assertion that there is not one single nature, but instead only *natures*, "And these natures are not inherent in the physical world but discursively constructed through economic, political and cultural processes" (p. 95). Similarly, Wals (1994) points to the historical delineations being indicative of 'nature' constituting a Bdynamic mental construction" (p.5), which reflects people's interactions with a changing world. This notion is further evident in his conjecture that "...the idiosyncrasy of experience and the contextual realms that bound experience cannot be ignored when studying people's experiences and perceptions of nature." (1994, p.5).

Given these significant considerations, it is key to note that the themes discussed below did not emerge in the discussions neatly, but instead there was an amalgamation and mixing of themes which interflowed creating a comprehensive account of children's constructions of nature. These themes, and related discourses, are discussed in detail below.

THEME 1: Safety and Natural Spaces

The inextricable connection between children's feelings toward safety and the ability to engage in natural spaces was a key theme, which received considerable emphasis from the participants. The socio-economic standing of the community context in which children live had a direct effect on their experiences in, and the meaning they attach to natural spaces, as well as their well-being. The concern of credible threats to safety was a recurrent theme, particularly for the learners from the rural and urban schools which were located in hotspots of criminal activity in the province. This has influenced children's subjective well-being and mobilities, as most children feel that it is safest to be "indoors" at home. Natural spaces, and very often spaces for recreation intended for children, are tantamount to spaces of danger and imminent threat. This is demonstrated in the extract below.

Facilitator: So...why are you indoors a lot?

Male Participant: It is safer inside than to be outside.

Female Participant: Because of the violence.

Male Participant: They shoot a lot.

Male Participant: The people are gang related there.

Male Participant: It is actually ourselves that is worried about it.

Male Participant: We – said now we are scared of dying, but it is, but me, I am, most of the time outdoors. In my area we have a park.

Male Participant: [continues]...So I am mostly outside, I am with friends, but in some areas it is not that dangerous. Because for me, I am not actually scared of dying, to be honest.

Group 1: Session 1

Extract 1

The extract above points to safety as an integral component of children's lives, particularly in relation to being outside in natural spaces. The concern with safety was pervasive in discussions with children, presenting the initial and most prominent discourse, that of *safety as a pervasive concern*. Safety and more so, threats to children's safety was made sense of in variant ways with nuances present in the participant's narratives. A male participant states that "It is safer inside than to be outside", implying that home is amongst only a few spaces children consider safe. The participants further identified violence and gang related problems as some of the threats against their safety in parks and other natural spaces. The participants clearly indicated that they *themselves* were concerned as the threats they are faced with have become commonplace, with many sharing first hand experiences.

Children from the middle-SES context indicated that "*Safety is not a problem*" which contrasts to the participants accounts from the low-SES community. For these children it was '*wild*' nature, and not people that pose a threat to their safety. Added to the adverse safety concerns, many children revealed that they only felt safe with friends or "When you near an adult". This brings to the fore the discourse of *children as vulnerable*. This vulnerability is made reference to from the participant's themselves, constructing themselves as delicate and in need of protection. Unsafe conditions within their communities limit their mobility, thus they are rarely able to make their own special places in nature or explore their environment. For

the children living in the low-SES communities, nature experiences were sporadic; with superficial understandings of nature provided. It was most often literal backyard or garden nature wherein their experiences were derived. This disparity is undoubtedly attributed to the distinctly lower crime rate in Gordon's Bay, as well as the fact that objective indicators point to residents of this suburb having a greater sense of material well-being. It is important to take cognisance of the varied constructions of *safety* which children from the different communities put forward. Resounding findings by Wals (1994), for the children from the low SES communities in this study, their understandings and experiences revealed that safety was a pervasive concern which gained its impetus from credible, and often first-hand negative experiences in their neighbourhoods, such as being harmed, harassed, or even recalling experiences of being sexually assaulted. Nature was often cited as a hub for these types of offences against children. As indicated above, for the children from the middle SES community, the issue of safety was made sense of in an entirely dissimilar manner- for these children the topic of safety was not breached throughout the discussions. Further probing around safety resulted in children relaying adults' or parents' narratives of 'stranger danger' as the greatest concern, with none of the children having experienced threats to their personal safety to the extent that children from the low SES communities did.

Elaborating on this, Wals (1994) notes that there were great disparities in children's discussions around safety, with the group from the suburban area not even breaching the topic *"In the suburban interviews this issue does not emerge even once. This result led to the notion of threatening nature. This type of nature is different from challenging nature in that its challenges are not part of nature itself, but posed by frightening people who are in nature. Additionally, a challenge is something to overcome and can make nature an exciting place to be, but a threat is frightening and can keep people from going to nature in the first place."* (p.21). These nuances in the connotations and meanings children ascribe to safety are undoubtedly largely influenced by their communities, with negative experiences within childhood impacting on children's later life trajectory into adulthood, and ultimately their quality of life (Barbarin 2003).

Additionally, when children were asked on various occasions about their favourite times spent in nature, children from low-SES communities very often reproduced the same narratives, demonstrating the lack of their experiences in nature. For many of these children the discourse of *children as vulnerable* was closely related to the discourse of *protection*- that is the need for protection in natural spaces, and the need for protecting natural spaces, relating to issues of sustainable behaviour and acting pro-environmentally. The children who did not have safety as a pervasive concern in their community, namely from the middle-SES community, divergently presented new, in-depth narratives on their experiences in nature with each session.

What is most disconcerting and striking in this extract is a male participant's reference to fear of "dying", revealing the deleterious effect the perilous environment has on children. The entire statement of this participant is Borganized within a complex linguistic structure of...contrasts" (Potter and Wetherell 1992 p.47) and justifications. The extract above displays

the participant's anxiety, low self-esteem, and emotional *desensitisation* to violence in their communities. Research has evinced an association between exposure to community violence and its effects both on internalising and externalising behaviour problems and symptomatology. The discourse of *desensitisation* is particularly present in the participant's accounts (see Savahl 2010). However, this participant produces an *extreme case formulation* (Pomerantz 1986) by taking this evaluative dimension of threats to safety, and espousing it to its extreme limit. This contradiction is interesting as this participant presents two dichotomous views on safety- the first an impetuous expression of the collective fear for their lives in their community; the second a considered account from the participant in which he portrays himself as disparate from the rest of the group. This also conveys a sense of compromise between the likely risk and benefits of being outdoors in nature. Furthermore, this participant affirms that he has more control over his mobility in nature than his peers employing the discursive technique of 'denial of victim' by disavowing this role of former or potential 'victim'; and in doing so sets himself apart.

What is intriguing about this narrative by this participant is that as Potter and Wetherell (1987, p.76) note "people are not inventing these accounts anew but drawing from a range of pre-existing resources." Therefore, while the participant is overtly aware of the trepidation to his safety, he still spends time outdoors. This leaves the reader with a sense of discord between what the participant says about being afraid of death owing to the unsafe context, and the participants' reference to his actions which is to play outdoors regardless of this trepidation. However, the participant then makes sense of this discord with a disclaimer that "Some areas are not that dangerous", which explains this relative dissonance. The participant is also suggesting that there are gradations of safety of outdoor areas in his community. Additionally, it relays a sense of the participant being 'street smart' and being cognisant of particular *safer* spaces for children to play. It is also significant to note here that while the participant mentions that not all outdoor areas are equally dangerous, he does *not* mention that some areas are devoid of safety concerns; indicating that safety is always a consideration for children.

Children from the low-SES communities specified that the various forms of violence and abuse against children were regular occurrences, and in particular within natural spaces, such as abductions, physical abuse and rape, murder, getting robbed if walking to the park, criminal elements who are abusing drugs, as well as being threatened. A female participant mentions that engaging in nature such as the park in the neighbourhood is often met with hostility, with these criminal elements threatening children and saying things like "get off here or I will beat you up!" (translated). The threats which children felt in natural spaces also extended to these spaces being polluted or unclean, which relates to the next theme.

THEME 2: Degradation of Nature and Efforts Toward Sustainable Development The problem of pollution was quite prevalent in the children's discussions and linked directly to the state of their communities. These polluted natural spaces were another factor limiting children's play, and their ability to be able to explore their environments. This limitation was however, not shared across groups. Children also revealed that fellow learners at school, as well

as in the community, thoughtlessly litter without consideration for the consequences thereof. The participants were also acutely aware of acting pro-environmentally, with many alluding to the benefit of sustainable development in their communities. The importance of environmental learning was also pointed out by the children, with many knowledgeable about global environmental concerns and issues around *global warming*. The following extract demonstrates these findings.

Facilitator: Do you think there are any other things that could play a role on your well-being?

Female Participant: Environment.

Interviewer:...Can you tell us a little bit more about that, what you mean?

Female Participant: It's...like it's not clean it is dirty and you can get sick.

Group 1: Session 1

Interviewer: So what kind of things are they doing by not respecting nature?

Male Participant: Polluting [All respond] dumping on the fields [All respond]

Female Participant: We do not really play in the parks as there is lots of glass and things.

Group 2: Session 2

Extract 2

The children explicitly stated that the environment has an impact on their subjective well-being. The portrayal of their communities and neighbourhoods as “dirty” had a direct impact on children’s health, with most avoiding nature for this reason. This fear of contamination and polluted fields and parks was discussed often. Additionally, children displayed a preference for playing in safe natural spaces at school, for two primary reasons. The first is that the parks are polluted with broken glass which makes it a health hazard to play there; and secondly, the allusion is again made to natural spaces as a hub for criminals and drunk people posing an even bigger threat to their physical well-being. Thus presenting the discourse of *nature as the despoiled space*. This discourse makes reference to the physically polluted state of nature as well as the characteristically unsafe space which nature represents for most children. The impetus behind some children’s narratives introduces a discourse of a ‘*repudiation of responsibility*’ (see Adams and Savahl 2015). This repudiation and externalisation of responsibility to others to be environmentally conscious and clean up litter represents the use of a justification (Potter and Wetherell 1987) by those who pollute.

While environmental education was not part of the school curriculum, the children indicated that environmental learning was a component of a few school subjects. A female participant points to the crucial role of school in her life, that is “*to become something in life*”. This is related to the context which she lives in which is characterised with low educational attainment, high levels of crime and violence, and with most parents in this group working as labourers on nearby farms. It also signifies the importance of hope and aspirations for this participant. The children in all groups were knowledgeable about environmental issues faced both globally and locally owing to learning about it in certain school subjects. Many children spoke about the imminent repercussions of human actions contributing to global warming and ozone depletion. Many children noted that learning

about nature at school is fundamental, as it allows them to become acutely aware of their own and others actions on the environment. The children also made reference to a number of ways to mitigate climate change, which was predominantly centred on combating pollution and environmental degradation. A key discourse which arose from nature learning in school was *thinking environmentally, acting pro-environmentally*. This discourse is explored in the extract below:

Facilitator:...do they teach you about nature at school?

Male Participant: Yes. Natural science, (All talk at once)

Female Participant: We learn about Ecosystems.

Female Participant: Deforestation.

Group 2: Session 1

Male Participant: The people dump the things in the river and then people that don't have water they come and drink the water and they get diarrhoea and then they die.

Female Participant: They also like tell you sad stories about what is happening around the, in the (All talk at once) so that makes you, gives you a wakeup call

Group 1: Session 2

Co-Facilitator:...And you think that nature is important for young people?

Female Participant: Yes.

Group 2: Session 1

Facilitator: So why do you think that the dumping is a problem?

Male Participant:...it opens the ozone barrier and then the sun comes through and it melts the snow

Facilitator: So how does it make you feel when you hear about these things that are happening in nature?

Male participant: Sad, but then we still do it.

Group 1: Session 2

Extract 3

In this extract several aspects regarding environmental learning at school is presented by the participants. The use of the expression "gives you a wakeup call" places emphasis on the consequences of degrading nature, but more so reveals a sense of reflection from this participant- a considered response. The children were in agreement that learning about nature is vital for young people who need to take steps toward pro-environmental behaviour, presenting the discourse of *thinking environmentally, acting pro-environmentally*. While the participants were aware of the longer term health effects of global warming it was a problem 'out there', presenting an *eco-crisis discourse*. The participants' narratives convey the sense that this crisis is prevalent in poorer developing countries and not in their local community; the repetition of the word *they* in the following statement lends credence to this point "*they* come and drink the water and *they* get diarrhoea and then *they* die." While this falls in line with the trend of contemporary

research focus in the field as Mayer and Frantz (2012) note, children's ability to have direct experiences in nature is fundamental to foster an intrinsic care for nature, and the lack thereof will result in children not appreciating and caring for nature. Even so, the discourse of *environmental value* was prominent in children's discussions around protecting nature. A male participant states that while people have knowledge of the corollary of their behaviours they repeat the same behaviour without feeling any sense of accountability.

Following discussions of pollution and global warming, the children astutely steered the conversation toward mitigating behaviours for the protection of nature. This is revealed in the extract below.

Female Participant:...Don't litter.

Female Participant: Keep the places clean.

Male Participant: Water the plants.

Male Participant: More gardens, more grass.

Male Participant: Less water.

Facilitator:...Do you think it is important to protect nature just for now?

Male Participant: Because there are many other generations to come.

Male Participant: We also have to teach the next generation to protect nature.

Group 1: Session 1

Extract 4

The participants suggested several ways to protect natural spaces in their communities, but also advocated for more greenspaces in their neighbourhoods. The significance of the discourse of nature as both nurturer and nature as a revered space is evident in this extract, captured in a female participants' conjecture that nature "It's basically everything to me". The use of the adjective "basically" by this participant exudes a definitive sense of being matter of fact. This participant then continues that "Without nature there is basically nothing"- again matter of fact, as well as having a reflective tone, that every life process no matter how mundane comes down to relying on nature in some manner. The participants also made reference to issues of sustainable development, that is protecting nature for the "...many other generations to come", as well as the requisite responsibility of teaching "the next generation to protect nature." The implication of this reference is that nature should not only be protected for current and future generations, but also for the intrinsic value and worth of nature itself, which is in line with the denotation put forward by Hart (1997). The discourse of environmental value is again presented here. Nature as aesthetically beautiful; to be admired and not touched.

THEME 3: Appreciation of Natural Spaces

While many children have experienced threats to safety in natural spaces, this did not deter children's appreciation of natural spaces. It was evident from the discussions with children that nature is an important place and space to them. This theme was also linked to the related theme of *Degradation of Nature and efforts toward Sustainable development* where

children discuss ways of living more sustainably. This theme is explored in more detail below.

Female Participant: Of everything that's in the outdoors like the stuff that grew by itself it didn't—it wasn't man made.

Female Participant: I think of it because I love exploring in the nature and like taking pictures of things that I don't really know much about...

Co-Facilitator: Do you guys go to the beach a lot?

Female Participant: Yes.

Female Participant: Surfing.

Female Participant: I just like laying on the grass and watch the clouds and the birds and the trees or something.

Co-Facilitator:...how does that make you feel?

Female Participant: Relaxed.

Female Participant: I also like cycling in the mountains.

Female Participant: Then you like feel away from everything you can just be like yourself... Get away from all the electronic stuff and worries...

Group 2: Session 1

Extract 5

It is evident from the extract above that nature was a special place for children. Based on children's discussions of their experiences in nature it emerged that some are more familiar with nature, having more opportunities to engage in nature. A female participant states that "I love exploring in nature...", with many indicating that they enjoy spending time in nature. Others conversely, were "excited" to be spending time in nature without electronic devices. There was consensus that nature is an escape for them, that just being in nature made them feel happy and "relaxed". A female participant points to how being in nature makes "you like feel away from everything you can just be like yourself..." Children showed a predilection for playing with friends in natural spaces, whilst at other times just spending time by themselves—with nature having a calming effect on them.

There was also a distinction in terms of what nature meant to children. For one participant nature comprises things that grow outdoors, autonomously, hence "it wasn't man made." However, for a group of children from one of the low-SES communities, safe natural spaces were not only less accessible, but included built places with superficial aspects of nature. This superficial nature included the aquarium, a theme park and a games centre. These constructions of *superficial nature* may be linked to the lack of access and therefore experiences in nature of the children in these impoverished communities. Despite this limited access and engagement in natural spaces, the key experiences children take from nature are vivid memories with positive meanings. Children's recollections of their nature experiences in low-SES communities were based on noteworthy, distinct, limited experiences in nature. When further asked about their favourite time spent in nature, children simply rehashed

previously mentioned experiences, providing shallow, rudimentary accounts of engagement in nature.

Children with unrestricted access to safe natural spaces, provided several extensive and in-depth accounts of various experiences in nature which were not intermittent but regular. There was accord amongst all children that this would negatively affect their well-being if they were no longer able to engage in nature. Others utilised the following adjectives to demonstrate how this restriction from nature would make them feel: “depressed”, “heart sore”, “unhappy”, and “disappointed. Further elucidation revealed that nature is significant firstly, “Because I don’t always like sitting in front of a TV or being inside so much I will go and play around outside”, and secondly, “Because, as human beings we also need nature to survive” and “And nature needs you”. The first participant suggests that a balanced diet of being indoors and importantly spending time in nature is necessary as she does not “always like sitting in front of a TV”, as being in nature allows you to “free your mind.” Secondly, the two male participants refer to nature being central to their livelihood, which should include reciprocity between nature and people and an intrinsic care for natural spaces. Another participant makes reference to the symbiotic relationship between humans and nature- in essence referring to the discourse of *nature as nurturer*.

Moreover, some of these children’s favourite natural places were located far from home, for example the Burban park” (32 km away) and the waterfall at the reservoir (26 km away). In spite of this trend, one male participant provided a meaningful narrative of his favourite time spent in nature: “excited when I was helping my grandfather and my grandmother growing plants and trees...” This participant then adds that the motivation for this being a memorable experience in nature was the social connection that nature afforded. This explanation is significant as it places emphasis upon the positive effect this experience in nature had on his subjective well-being and draws attention to the significance of *nature as a catalyst for social connection*.

In this sense natural spaces afforded children the opportunity to spend time with friends and just enjoying being in nature.

Female Participant: Where we camped last time it was like a river and then you walk across the river and it’s the sea so you could go to the river or the sea.

Group 2: Session 2

Male Participant: We actually having a social connection, because you don’t have your cellphones...

Male Participant: I was so excited because we were just chatting to each other and laughing as a family, having a nice time together.

Group 1: Session 1

Facilitator: And how does it make you feel that they are fencing the gate off because...they don’t want you to use it?

Male Participant: I feel like we are prisoners (All talk at once)

Male Participant: Because before this was fenced, our friends we used to sit here and talk...You could sit under the trees.

Group 1: Session 2

Extract 6

The importance of spending time in nature for children has been demonstrated in all the themes which emerged in the study. A common thread within these themes was the value of family, friends, and close relationships in children's lives, with nature playing a central role. A male participant mentions that spending time in nature enables children to have "a social connection" indicating that within other spaces such as at home or at a friend's house other activities predominate their time use. In the above extract children point out the significance of the intrinsic worth of family in both taking pleasure in and benefitting from nature. Despite these positive experiences gained from present and past nature experiences with family and friends, for one group of children the circumstances at school were not as encouraging. These children described memorable times spent during recess time with friends on an open field within the school grounds where they would either "talk" with friends or sit under the trees and relax and enjoy nature. With the changing of school policy, the children were prohibited from using this special place in nature. Again the discourse of *nature as aesthetically beautiful, not to be damaged* by children was present. This was met with indignation by children in their tone as this restriction on their ability to engage in a revered natural space made them feel "like prisoners". The restriction of access to one of the only safe natural spaces in the community available to them was distressing to students.

THEME 4: Nature and Children's Subjective Well-being

Based on children's narratives and the meanings they attribute to their experiences in natural spaces, it was evident that this appeared to influence their subjective well-being both directly and indirectly.

Co-Facilitator: How important is nature for you to feel well and happy?

Female Participant: Very.

Female Participant: Yes, we can't if there weren't any trees which pollinated them we couldn't breathe.

Male Participant: Fresh. Male Participant: Free. Male Participant: Happy.

Male Participant: Excited, energetic.

Male Participant: It gives you good exercise.

Group 2: Session 1

Male Participant: It makes me feel good.

Male Participant: No mother shouting with you.

Male Participant: (All talk at once) but when you are in nature; it is like heaven on earth there is nothing stopping you.

Group 1: Session 1

Extract 7

The extract above demonstrates the positive effect that engaging directly in nature has on children's subjective well-being. When describing how nature makes them feel, children used adjectives such as "fresh", "free", "happy", "excited", and "energetic". A female participant also discussed how being in nature affects her emotional well-being in particular. The overall sense of children's experiences in nature improved their subjective well-being. The participants often made reference to various domains of their subjective well-being that is influenced by nature experiences such as physical, emotional, psychological, and social. The children's accounts engendered the discourse of *intrinsic care for nature*. In terms of physical well-being children discussed how playing in nature was pertinent for their health and well-being as well as providing a form of exercise. Children also emphasised the value of participating in sport activities at school which enabled them to be in open greenspace, which for children from low-SES communities provided congenial experiences. Regarding the impact of nature experiences on children's affect, while children strongly conveyed the positive emotions, negative emotions often dominated their experiences in nature. More so, this discourse of *nature as the dangerous other* appeared to be more than just a probable threat to children; this sense of fear was part of children's daily lives, with every aspect of their lives being viewed through a *safety lens* (see Adams and Savahl 2015; Parkes 2007). A quintessential exemplification of the critical role of nature on children's subjective well-being was a participants' conjecture that "When you are in nature it is like...heaven on earth there is nothing stopping you." The use of this simile, comparing nature to "heaven" emphasises the credence this participant places on nature, but also the satisfaction it affords them. Nature is also positioned at an elevated level, which further suggests that being in nature provides unlimited opportunities and levels of happiness.

3.1 Summary of Emerging Discourses

Several pertinent discourses emerged from the participant's accounts within the four themes of: *Safety and natural spaces*, *Appreciation for natural spaces*, *Degradation of Nature: Thinking environmentally, acting pro-environmentally*, and *Natural spaces and children's subjective well-being*. It is evident from the children's accounts that they use various discursive techniques to make sense of their experiences in natural spaces. A major point of note from the children's accounts was the importance that engagement with natural spaces has on their subjective well-being.

The discourse of *safety as a pervasive concern* was one of the most manifest themes, particularly for children living in low-SES conditions. The credible, ubiquitous threat facing children directly negatively impacted their well-being, with many exhibiting and describing symptoms of anxiety, trauma, hyper-vigilance, and a debilitating fear of death owing to the high rates of crime and violence. Children from the middle-SES status community made reference to fears of '*wild nature*'- the discourse of safety as a pervasive concern was thus not evident in their accounts. Notwithstanding, all the children were acutely aware of impending threats and danger, and for many this fear and constant need for vigilance in their

community was clearly incorporated into the way they make sense of the world. Their accounts were imbued with trepidation, anxiety and a sense of helplessness. The sense of fear, and the recurring discourse of *children as vulnerable* provides insights into children's meaning making. Children relied on adults to feel a sense of safety, with safety concerns fundamentally governing how children navigate their lives, restricting their mobility and narrowing their exploratory spaces. Landry (2005) notes that in decrepit environments, similar to the current context, children internalise a sense of powerlessness, *vulnerability* and fear, which in turn moulds and influences their self-identity. Further, individuals in this environment may unwittingly become perpetual recipients of this sense of fear and incorporate it into the fabric of their daily lives.

The reality of the escalating levels of crime and violence in South Africa, particularly with children as victims, has led to a society that is overly aware of their surroundings and environments. Children's narratives point to them being hyper-vigilant in their surroundings, very often with school and home being the safest places. While children were able to identify that the threat in the discourse on *nature as the dangerous other* was not nature but instead the criminal element in nature, they still synonymise nature with danger. Children's accounts of experiences in natural spaces was drawn from limited interaction therein, evident in the *superficial nature* which many referred to. Nature experiences were far and few between, and very often made sense of as an *ideal* space of childhood. In reference to Winnicott's (1960) concept of the by the bad, and in this context the potentially unsafe. Positive emotions experienced in natural spaces are therefore fostered, internalised, and espoused.

Continual conflicting and contrasting constructions were presented as children expressed their understanding of the significance of nature, and the associated impact it has on their well-being. Nature was constructed through binaries: as familiar and as an estranged place, as a threatening and threatened space, as the dangerous other and as a special place. Apposite in children's discourses was how their most memorable experiences in nature were in natural spaces far from home, as nearby nature was unsafe. Capturing this interpretation, Zelenski and Nisbet (2014) point out that engagement in natural spaces has numerous positive outcomes for children, even when their engagement is circumscribed. It was evident from children's narratives that safe natural spaces acted as a buffer against life's stressors, promoting the development of resilience competencies (Wells and Evans 2003). This sentiment was linked to the discourse of *nature as a catalyst for social connection* in the children's accounts. The idea of nature acting as a catalyst was conceived of as an element enabling shared Bsensory presence" (Hordyk et al. 2014). All three groups of children spoke about school camps they attended, and enthusiastically relayed their memories of these occasions for them. The collective exploring and learning in nature was markedly associated with their feelings of happiness; in essence Bstates of relaxed and heightened attunement" (Hordyk et al. 2014, 11). In a sense, nature engendered a positive emotional space.

The evidence of the social bonds and relationships was demonstrated in the group activities children described in nature, and the way in which it connected them to nature and each other. For many children whose local natural spaces are unsafe, these camps provided a safe context for expression of the self through emotions and play. For those children who had experiences and narratives of nature engagement, the camps served to further solidify their appreciation and *intrinsic care for nature*, a sentiment which was expressed by all the participants. Akin to the findings from Hordyk et al. (2014), the children in the current study also expressed a desire that their experiences in nature could continue and become more frequent given the deficiency of time spent in nature in their daily lives. Despite this deficiency, children's discourses and discussions culminated in an '*environmental identity*'. Noting the contestation and critique surrounding the conceptualisations of '*nature*' and '*identity*', Clayton and Opatow (2003) propound an '*environmental identity*' encompassing the manner in which we acquaint ourselves with nature, and significantly, that the Bnatural environment serves to inform people about who they are." (Clayton and Opatow 2003, p.9). The *environmental identity* forms part of our self-concept as we associate ourselves to some type of 'non-human nature, impacting on the way we make sense of and behave (Clayton 2003). Based on the meanings derived from children's narratives about their engagement in nature, we come to see that how children see themselves in nature is permeated with a collective socio-culturally influenced notion of what nature is and means; with many contesting the social norm of nature as unimportant in their communities and family lives. The social context then greatly influences how much time children are able to spend in nature, and the significance they attach to these natural spaces. A number of empirical studies have shown that the more time children spend in safe natural spaces, the more they value nature and incorporate it into their sense of self and show intrinsic care for it (Hordyk et al. 2014).

The overarching sense of an *environmental identity* was closely related to children's dissatisfaction with the polluted environments in their communities. Their dissatisfaction presented a discourse of *repudiation of responsibility* of fellow community members and peers who do not consider the consequences of their degrading behaviours. Despoiled natural spaces were often the central points for crime, violence, and danger; highlighting the crucial role which children's environments has on their subjective well-being. More so, the discourse of *repudiation of responsibility* gave rise to discussions about sustainable development and behaviours to protect and conserve nature at a day-to-day level, as well as for the future. The discourse of *thinking environmentally: acting pro-environmentally* was pertinent in these deliberations.

Children were also aptly aware of the *eco-crisis*, a discourse which was significant for two reasons- firstly, it revealed children's *intrinsic care* and *reverence* for nature, and secondly, children's awareness of ecological problems in current society. However, these environmental problems were often discussed as removed from the participant; putting forward the idea of the *eco-crisis* as a distant '*other*'. This was closely linked to the discursive theme of the influence of *intergenerational transmission of environmental consciousness*, knowledge, and care, of parents' and other significant close family members on children's meaning making (Chawla 2006). It was evident from children's narratives that nature was not

merely a space out there, but had become a *special place* of meaning for children which they value and have developed an attachment to—both on a personal and collective level. Children’s relationship with nature has evinced a critical role on their ‘future life trajectories’, with nature perceived as having a significant impact on children’s social and emotional well-being (Huby and Bradshaw 2006).

3.2 Conclusion and Recommendations

A trend has emerged amongst scholars in merging theory and research on environmental psychology, sustainability, and positive psychology. This merger places emphasis on the importance that engaging with the natural environment has on children’s well-being and quality of life.

While nature was not specifically mentioned in the United Nations Conventions on the Rights of the Child, Scianis (2013) notes that researchers and policy makers need to advocate for including the natural environment as a sub-domain of children’s subjective well-being. In South Africa, children’s subjective well-being is closely related to the context which children live in which is characterised by crime and violence and fear of threat. However, in this study nature is shown to be a *special place* of childhood, affording benefits to children’s well-being both directly and indirectly, and serving to unify children from diverse contexts. The significance of nature then provides the impetus for developing research studies to evaluate the influence of children’s engagement in nature and the related impact on their subjective well-being, and how these benefits can be harnessed to better children’s overall quality of life.

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References

- Adams, S. & Savahl, S. (2015). Children's perceptions of the natural environment: A South African perspective. *Children's Geographies*, 13(2), 196–211.
- Adams, S. & Savahl, S. (2016a). The relationship between children's perceptions of the natural environment and their subjective well-being. *Children's Geographies*. doi:[10.1080/14733285.2016.1157571](https://doi.org/10.1080/14733285.2016.1157571).
- Adams, S. & Savahl, S. (2016b). Nature as children's space: A systematic review. *Journal of Environmental Education* (in press).
- Aitken, S. (2001). *Geographies of young people: The morally contested spaces of identity*. New York: Routledge.
- Allred, P., & Burman, E. (2005). Analysing children's accounts using discourse analysis. In S. Greene & D. Hogan (Eds.), *Researching children's experience approaches and methods*. London: Sage.
- Bannerjee, K., & Driskell, D. (2002). Tales from truth town: Children's lives in a South Indian 'slum'. In L. Chawla (Ed.), *Growing up in an urbanizing world*. London: Earthscan/UNESCO. doi:[10.1080/14733285.2013.829659](https://doi.org/10.1080/14733285.2013.829659).
- Barbarin, O. A. (2003). Social risks and child development in South Africa: A nation's program to protect the human rights of children. *American Journal of Orthopsychiatry*, 73(3), 248–259.
- Benson, C. L. (2009). Changing places: Children's experience of place during middle childhood. Unpublished Master's Thesis. Humboldt State University: Humboldt County, California.
- Braga, G. B., Remoaldo, P. C., & Fiúza, A. L. (2016). A methodology for definition of rural spaces: an implementation in Brazil. *Rural Sociology*, 46(2), 375–380.
- Burgess, D. J., & Mayer-Smith, J. (2011). Listening to children: perceptions of nature. *Journal of Natural History Education and Experience*, 5, 27–43.
- Catterall, M., & Maclaran, P. (1997). Focus group data and qualitative analysis programs: coding the moving picture as well as the snapshots. *Sociological Research Online*, 2(1). <http://www.socresonline.org.uk/2/1/6.html>.
- Chawla, L. (2006). Learning to love the natural world enough to protect it. *Barn*, 2, 57–78.
- Chawla, L. (2007). Childhood experiences associated with care for the natural world: a theoretical framework for empirical results. *Children, Youth and Environments*, 17(4), 144–170.
- Clayton, S. (2003). Environmental identity: A conceptual and an operational definition. In S. Clayton & S. Opatow (Eds.), *Identity and the natural environment: The psychological significance of nature* (pp. 45–66). London: The MIT Press.
- Clayton, S., & Opatow, S. (Eds.). (2003). *Identity and the natural environment: The psychological significance of nature*. London: The MIT Press.
- Collado, S., Staats, H., & Corraliza, J. A. (2013). Experiencing nature in children's summer camps: Affective, cognitive and behavioural consequences. *Journal of Environmental Psychology*, 33, 37–44.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95, 542–575.
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, 55, 33–43.

- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: three decades of progress. *Psychological Bulletin*, 125(2), 276–302.
- Edwards, D., & Potter, J. (1992). *Discursive psychology*. London: Sage.
- Evans, G. W. (2004). The environment of childhood poverty. *American Psychologist*, 59(2), 77–92.
- Evans, G. W., Juen, B., Corral-Verdugo, V., Corraliza, J., & Kaiser, F. G. (2007). Children's cross-cultural environmental attitudes and self-reported behaviors. *Children, Youth and Environments*, 17(4), 128–143.
- Fattore, T., Mason, J., & Watson, E. (2007). Children's conceptualisation(s) of their well-being. *Social Indicators Research*, 80, 5–29.
- Fattore, T., Mason, J., & Watson, E. (2012). Locating the child centrally as subject in research: towards a child interpretation of well-being. *Child Indicators Research*, 5, 423–435.
- Gill, T. (2014). The benefits of children's engagement with nature: a systematic literature review. *Children, Youth and Environments*, 24(2), 10–34.
- Hart, R. A. (1997). *Children's participation: The theory and practice of involving young citizen's in community development and environmental care*. New York: UNESCO.
- Hordyk, S. R., Dulude, M., & Shem, M. (2014). When nature nurtures children: nature as a containing and holding space. *Children's Geographies*. 014.923814.014.923814.
- Huby, M., & Bradshaw, J. (2006). *A Review of the environmental dimension of children and young people's well-being*. London: Sustainable Development Commission.
- Huppert, F. A., & So, T. T. C. (2013). Flourishing across Europe: application of a new conceptual framework for defining well-being. *Social Indicators Research*, 110, 837–861.
- Huynh, Q., Craig, W., Janssen, I. & Pickett, W. (2013). Exposure to public natural space as a protective factor for emotional well-being among young people in Canada. *BMC Public Health*, 13, 1–14.
- James, A., & Prout, A. (Eds.). (1990). *Constructing and reconstructing childhood: Contemporary issues in the sociological study of childhood*. London: Falmer.
- Jenks, C. (2004). Editorial: many childhoods. *Childhood*, 11(1), 5–8.
- Kerret, D., Ronen, T., & Orkibi, H. (2014). Green perspective for a hopeful future: explaining green schools' contribution to environmental subjective well-being. *Review of General Psychology*, 18(2), 82–88.
- Keyes, C. L. M. (2002). The mental health continuum: from languishing to flourishing in life. *Journal of Health and Social Behavior*, 43, 207–222.
- King, K., & Church, A. (2013). We don't enjoy nature like that: youth identity and lifestyle in the countryside. *Journal of Rural Studies*, 31, 67–76.
- Kjørholt, A. T. (2002). Small is powerful-discourses on 'children and participation' in Norway. *Childhood*, 9(1), 63–82.
- Knight, S. (2009). *Forest schools and outdoor play in the early years*. London: Sage Publications.
- Kong, L. (2000). Nature's dangers, nature's pleasures: Urban children and the natural world. In S. L. Holloway & G. Valentine (Eds.), *Children's geographies* (pp. 257–271). London: Routledge.

- Landry, C. (2005). Risk and the creation of liveable cities (Chapter One). *What are we scared of? The value of risk in designing public space*. CABA Space.
- Macnaghten, P., & Urry, J. (1999). *Contested natures*. London: Sage.
- Manderson, L. (2005). Introduction: The social context of wellbeing. In L. Manderson (Ed.), *Rethinking wellbeing*. Perth: API Network.
- Matthews, H., Taylor, M., Sherwood, K., Tucker, F., & Limb, M. (2000). Growing-up in the countryside: children and the rural idyll. *Journal of Rural Studies*, 16, 141–153.
- Mayer, F. S., & Frantz, C. M. (2012). The connectedness to nature scale: a measure of individuals' feeling in community with nature. *Journal of Environmental Psychology*, 24, 503–515.
- Moses, S. (2005). Does space and place matter? Perspectives from girls growing up in a Cape Town neighbourhood created under apartheid. Centre for Social Science Research, Working paper No. 136.
- Myers, O. E. (2012). Children and nature. In S. Clayton (Ed.), *The Oxford handbook of environmental and conservation psychology* (pp. 113–127). London: Oxford University Press.
- Nairn, K., Panelli, R., & McCormack, J. (2003). Destabilizing dualisms: young people's experiences of rural and urban environments. *Childhood*, 10(1), 9–42.
- OECD. (2011). *Regional typology*. Paris: OECD Publishing.
- Parkes, J. (2007). The multiple meanings of violence: Children's talk about life in a South African neighbourhood. *Childhood*, 14(4), 401–414.
- Pomerantz, A. (1986). Extreme case formulations: A new way of legitimating claims. In G. Button, P. Drew & J. Heritage (Eds.), *Human studies (Interaction and Language Use Special Issue)* (9, pp. 219–230).
- Potter, J. & Wetherell, M. (1987/1992). *Discourse and social psychology: Beyond attitudes and behaviour*. London: Sage.
- Punch, S. (2001). Multiple methods and research relations with young people in rural Bolivia. In M. Limb & C. Dwyer (Eds.), *Qualitative methodologies for geographers* (pp. 165–180). London: Arnold.
- Ridgers, N. D., Knowles, Z. R., & Sayers, J. (2012). Encouraging play in the natural environment: a child-focused case study of forest school. *Children's Geographies*, 10(1), 49–65.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: a review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141–166.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069–81.
- Sancar, F. H., & Severcan, Y. C. (2010). Children's places: rural–urban comparisons using participatory photography in the Bodrum peninsula, Turkey. *Journal of Urban Design*, 15(3), 293–324.
- Savahl, S. (2010). Ideological constructions of childhood. Unpublished Doctoral Dissertation. University of the Western Cape: Bellville.
- Savahl, S., Malcolm, C., Slembrouk, S., Adams, S., Willenberg, I., & September, R. (2015). Discourses on well-being. *Child Indicators Research*, 8, 747–766.

- Scianis, V. (2013). The influence of nature on secondary school students' subjective well-being in England and Greece. Unpublished Doctoral Dissertation. *Department of Geography and Environment*. The London School of Economics and Political Science: London.
- Seligman, M. (2011). *Flourish: A visionary new understanding of happiness and well-being*. New York: Simon & Schuster.
- South African Police Services. (2014). Crime situation in South Africa: Annual report. Statistics South Africa. (2011). *General household survey*. Pretoria: Statistics South Africa.
- Wals, A. E. J. (1994). Nobody planted it, it just grew! Young adolescents' perceptions and the experience of nature in the context of urban environmental education. *Children's Environments*, 11(3), 1–27.
- Wells, N. M. (2000). At home with nature: effects of greenness on children's cognitive functioning. *Environment and Behavior*, 32(6), 775–795.
- Wells, N. M., & Evans, G. W. (2003). Nearby nature: a buffer of life stress among rural children. *Environment and Behavior*, 35(3), 311–330.
- Wilson, R. A. 1996. Starting early: environmental education during the early childhood years. *ERIC Digest*. www.ericdigests.org/1998-1/early.htm
- Winnicott, D. W. (1960). The theory of the parent-infant relationship. *International Journal of Psychoanalysis*, 41(6), 585–595.
- Young, E. L. & Hoffmann, L. L. (2004). *Self-esteem in children: strategies for parents and educators*. National Association of School Psychologists, pp. 87–90.
- Zelenski, J. M., & Nisbet, E. K. (2014). Happiness and feeling connected: the distinct role of nature relatedness. *Environment and Behavior*, 46(1), 3–23.